

Abstract

A high-strength steel is provided that has excellent ductile fracture values J integral even at low temperatures, so the risk of breaking is reduced to a minimum even under unfavorable, hard operating conditions. This is achieved in that the steel contains (in % by weight) 0.08 to 0.25% C, 0.10 to 0.30% Si, 0.80 to 1.60% Mn, $\leq 0.020\%$ P, $\leq 0.015\%$ S, a sum of the P and S content being $\leq 0.030\%$, 0.40 to 0.80% Cr, 0.30 to 0.50% Mo, 0.70 to 1.20% Ni, 0.020 to 0.060% Al, 0.007 to 0.018% N, $\leq 0.15\%$ V, $\leq 0.07\%$ Nb, a sum of the V and Nb content being $\geq 0.020\%$ and the remainder being iron and inevitable impurities. The steel according to the invention is particularly suitable for the manufacture of high-strength chains.